Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for detecting the presence of a beta-lactam resistant micro-organism in a biological sample and simultaneously determining the genotype of the beta-lactam resistance, said method comprising

(i) obtaining a biological sample;

(ii) optionally isolating DNA contained in the sample;

(iii) contacting the DNA of the sample with a micro-array, harboring on predetermined locations thereon different sets of capture probes, under conditions allowing hybridization of complementary strands,

(a) wherein each representative of a set of capture probes comprises the sequence R^1-(X)-R^2, which sequence represents a selected part of the sequence of a beta-lactamase gene, wherein X represents a nucleotide triplet and its permutations, and wherein R^1 and R^2 each have a length of from about 3 to 20 nucleotides,

(b) wherein the different sets of capture probes are selected such that an adjacent set starts at a given position 3n of nucleotides down-stream from the first set of capture probes, wherein n is an integer of 1 to 10, so that the nucleotide sequence of the beta-lactamase gene is covered over a desired range, and

(iv) determining whether a hybridization occurs and, if so, at which position on the array, wherein the occurrence and location of a hybridization is indicative of the presence of a beta-lactam resistant micro-organism and also indicative of its specific resistance.

2. (Original) The method according to claim 1, wherein the DNA is isolated from the biological sample prior to contacting it with the array.

3. (Original) The method according to claim 1, wherein the DNA contained in the sample is amplified by means of one or more primer(s).

4. (Original) The method according to claim 3, wherein the amplified DNA is fragmented prior to the contacting step.

5. (Currently amended) The method according to claim 1, wherein the sequence R_1-X-R_2 is derived from a beta-lactamase of the micro-organisms selected from the group consisting of *E.coli*, ~~**Enterobacteiacae**~~ ***Enterobacteriaceae***, *Pseudomonas, Haemophilus, Neisseria, Enterobacter, Klebsiella,* ~~**Enterobacteiacae**~~ ***Enterobacteriaceae*** *(Enterobacter aerogenes, Morganella morganii, Proteus mirabilis Proteus rettgeri, Proteus* spp., *Providencia* spp. *Salmonella* spp.), *Klebsiella (K. pneumoniae, K. ozaena, K. oxytoca), Capnocytophaga ochrace, Citrobacter spp., Serratia marcescens, Shigella dysenteriae* and *Burkholderia cepacia.*

6. (Original) The method according to claim 1, wherein the capture probes are selected, so that the triplet to be permutated covers a known location of SNP's in the beta-lactamase gene.

7. (Original) The method according to claim 5, wherein the beta-lactamase is a serin- or a zink- beta-lactamase.

8. (Original) The method according to claim 1, wherein the beta-lactamase is selected from the group consisting of TEM beta-lactamase, SHV beta-lactamase, OXA beta-lactamase, a beta-lactamase exhibiting an Extended Spectrum (ESBL) phenotype and an Inhibitor Resistant TEM (IRT) phenotype.

9. (Original) The method according to claim 8, wherein the sequence derived from a beta-lactamase gene is as shown in table I.

10. (Original) The method according to claim 4, wherein the target DNA is fragmented to fragments having a size of about 15 to about 50 bp.

11. (Original) The method according to claim 1, wherein the DNA is labeled prior to contacting it with the capture probes.

12. (Original) The method according to claim 1, wherein the DNA is labeled after the contacting step.

13. (Original) The method according to claims 11 or 12, wherein the label is selected from the group consisting of fluorescence labels, colorimetric labels, radioactive labels, and labels that are electrically, electrochemically and/or enzymatically detectable.

14. (Original) A kit for detecting the presence of a beta-lactam resistant micro-organism in a biological sample and simultaneously determining the genotype of the beta-lactam resistance, which comprises:

(i) a micro-array, harboring on predetermined locations thereon different sets of capture probes,

(a) wherein each representative of a set of capture probes comprises the sequence R^1-(X)-R^2, which sequence represents a selected part of the sequence of a beta-lactamase gene, wherein X represents a nucleotide triplet and its permutations, and wherein R^1 and R^2 each have a length of from about 5 to 20 nucleotides,

(b) wherein the different sets of capture probes are selected such that an adjacent set starts at a given position 3n of nucleotides down-stream from the first set of capture probes, wherein n is an integer of 1 to 10, so that the nucleotide sequence of the beta-lactamase gene is covered over a desired range, and

(ii) buffers and reagents for performing the method.